# COMMONWEALTH OF MASSACHUSETTS
# DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

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| **Investigation by the Department of Telecommunications and Energy on its own motion into Distributed Generation** | **)** | **D.T.E. 02-38** |

# INITIAL COMMENTS OF THE MASSACHUSETTS DIVISION OF ENERGY RESOURCES

## Introduction

The Massachusetts Division of Energy Resources ("DOER") commends the Department of Telecommunications and Energy ("Department") for taking action to address existing barriers to the successful implementation of distributed generation ("DG"), one factor in the Massachusetts market equation. Maximizing the choices available to end-users associated with electric industry restructuring will only be achieved if all variable factors, including DG, in the market equation are allowed to function unimpeded in response to all other variable factors.

## Procedural Background

On June 13, 2002 the Department issued an order opening an investigation ("NOI") regarding the implementation of DG in Massachusetts. The proceeding was docketed as DTE 02-38. The Department simultaneously noticed the NOI and established deadlines of August 1, 2002, August 15, 2002, for initial and reply comments, respectively, and August 21, 2002 for the public hearing. Consistent with the established procedural schedule, the Massachusetts Division of Energy Resources ("DOER") hereby submits its initial comments in DTE 02-38.

## Scope of the NOI

The Department did not place specific limits on the scope of the proceeding. However, it did focus the scope in terms of the following three specific issues:

- The development of appropriate interconnection standards and practices
- The development of the appropriate methodology for the calculation of standby/back-up rates and other relevant charges related to the installation of DG
- The role of DG in distribution company resource planning

**Overview of DOER Comments**

The first section of DOER's comments focuses on the specific actions that the Department should take to maximize the value of DG in terms of the competitive market and as a reliability alternative. The second section of the comments focuses on the process that the Department should consider adopting to ensure that all potential DG issues are vetted and resolved in the most thorough and efficient manner possible.

**DOER Position**

DOER believes that DG has the potential to provide economic, system reliability, and environmental benefits. Potential economic benefits exist in reduced costs associated with the existence of DG as a market alternative for energy, capacity and ancillary services. For example, reduced costs may occur as a result of reduced retail energy costs for individual customers or reduced wholesale energy costs from the use of DG during peak periods to reduce congestion costs. Further economic benefits may be realized in reduced distribution costs resulting from DG offering a viable, least cost[1] alternative to distribution system upgrades. Reliability benefits may be realized at the distribution level, as a least-cost alternative to system reliability projects, and in the form of fewer forced outages, and at the wholesale level in the form of reduced transmission loading. Environmental benefits may be realized when DG displacement of "dirty" generating units supplying energy, capacity, and reserves results in reduced air emissions.[2]

[1] DOER notes that cost should only be a consideration in the context of a regulated distribution company's evaluation of DG as an alternative for system modification/upgrade for reliability purposes. Market forces should drive the viability of DG projects under all other circumstances.

[2] DOER notes that maximum emissions benefits would result from renewable and natural gas DG project displacement of dirty baseload plants. However, *net* emissions benefits *may* also occur as a result of diesel DG project displacement of baseload plants which otherwise must be operated as "spinning reserves" for many more hours than quick-start DG diesel units.

In order to realize the potential benefits of DG, the Department should act to remove, and/or mitigate, all existing barriers[3] that unnecessarily hinder the viability of DG as a market or reliability alternative. To accomplish this goal, the Department should take this opportunity to ensure that the regulatory framework in Massachusetts appropriately addresses all existing barriers. The goal should be a regulatory framework that enables DG to compete fairly, to the maximum extent possible, with all other market and reliability solutions.[4]

The Department has identified three important issues that need to be addressed. Each of these issues is discussed below.[5]

## I. Interconnection Standards

DOER recognizes the need for adequate interconnection standards to ensure that the reliability of distribution systems and that the safety of utility employees and the general public is not compromised. However, the existence of burdensome and inconsistent interconnection standards (between the Massachusetts distribution companies) creates a technical and business practice barrier that inhibits the development of DG. In order to mitigate this problem, DOER recommends that the Department establish a uniform interconnection standard, applicable to the majority of DG

[3] There are basically three types of barriers to DG: (1) technical (e.g. distribution company engineering interconnection standards); (2) business practice barriers (e.g. distribution company contractual and procedural interconnection requirements); and, (3) regulatory barriers (e.g. regulated interconnection tariffs such as back-up and standby tariffs). See National Renewable Energy Laboratory Report, Making Connections: Case Studies of Interconnection Barriers and Their Impact on Distributed Power Projects.

[4] DOER notes that economic and system reliability benefits can be achieved by a variety of measures (e.g. new transmission and distribution ("T&D") projects, new baseload generation, energy efficiency, etc.) and is not recommending one market or reliability solution over another. The economic or reliability value of any particular application of DG will necessarily be determined relative to all other relevant market/reliability options.

[5] DOER notes that actions taken pursuant to this proceeding should only remove unnecessary barriers. DOER does not promote regulatory actions that would result in direct, or indirect, subsidies to DG relative to other market and/or reliability solutions, or the removal of appropriate environmental constraints.

projects, that minimizes the technical and business practice barriers faced by DG developers.[6] A uniform standard, developed and implemented by the Department[7], would mitigate competitive inequities between different market/reliability solutions (e.g. DG v. energy efficiency). A uniform standard would also remove competitive inequities between different DG projects that currently exist due to disparate treatment of proposed DG projects across the different distribution company service territories. To ensure compliance with the Department's Order in this proceeding, DOER recommends that the distribution companies' interconnection standards be subject to Department approval and be kept on file for public inspection.

As stated above, DOER is recommending universal application of a uniform interconnection standard for the *majority* of DG projects. The one exception to this general rule is related to small DG projects.[8] DOER recommends that, to the extent feasible within technical/engineering constraints, the Department should adopt a streamlined standard to further mitigate the interconnection barrier for small projects.[9]

To ensure compliance with the Department's Order in this proceeding, DOER recommends that the distribution companies' interconnection standards be subject to Department approval, and that they be kept on file at the Department for public review.

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[6] DOER notes that the Institute of Electrical and Electronic Engineers is developing a uniform DG interconnection standard. The Department could adopt this standard outright, or use it as a reference in developing a Massachusetts standard.

[7] DOER recognizes that the standard would necessarily be required to be consistent with valid reliability requirements. To expedite the development of a uniform standard that meets the goals of all relevant parties, DOER recommends that the Department initiate a collaborative interconnection working group.

[8] DOER recommends that the quantitative and/or qualitative definition of "small" be defined collaboratively in the context of this proceeding.

[9] DOER notes that MECo filed a methodology for assessing relevant DG costs in a manner that seeks to simplify and streamline the process for reviewing and providing an assessment of cost for customers based on a project's size. The MECo standard could be utilized where appropriate. DOER notes that the MECo standard should be subject to the mandates of the Department's Order in this proceeding (DTE 02-38).

DOER recommends that the Department take the following specific actions in the context of creating the appropriate regulatory framework for the implementation of a uniform interconnection standard:

?? establish protocols by which distribution utilities would make readily available a description of the process, standards, practices, procedures and rules applicable to DG interconnections;

?? establish standard interconnection agreements defining the contractual relationship between distribution utilities and distributed generators; and

?? establish dispute resolution procedures that would be used when distribution utilities and distributed generators dispute DG issues that are subject to Department jurisdiction.

DOER recognizes that the interconnection standard(s) (for general and small DG projects) would necessarily be required to be consistent with valid reliability requirements. To expedite the development of a uniform standard(s) that meets the goals of all relevant parties, DOER recommends that the Department initiate a collaborative interconnection working group to facilitate the process.

## II. Methodology for the Calculation of Standby or Back-up Rates and other Charges Associated with the Installation of DG

The Department has correctly identified the issue of DG charges as one that may create barriers to the realization of potential benefits of DG. Allowing each distribution company to apply its own subjective methodology for calculating the relative charges leads to inconsistent and possibly, arbitrary fees. In order to minimize the impact that relative charges have on the implementation of DG, all distribution company charges must be just and reasonable and must reflect the true cost of providing the associated services. To ensure that all relevant charges are just and reasonable, DOER recommends that the Department institute a uniform, objective methodology for calculating

these charges.[10] All distribution companies should be required to utilize the same objective methodology in designing their respective charges, and all such charges should be incorporated into Department approved tariffs. Universal application of an objective, consistent methodology would level the playing field with respect to DG projects across distribution company service territories.[11]

## III. Appropriate Role of DG in Distribution Company Planning and System Operations

DOER believes that DG has potential value in distribution company system operations as a least-cost alternative to other forms of system improvements related to reliability and congestion management measures. However, the distribution companies' role in the implementation of DG for these purposes should be limited to facilitating appropriate DG market proposals and providing the requisite technical support for implementation of such DG projects.[12] DOER recommends that the Department consider the following process as means of realizing the potential benefits of DG in distribution company system operations in a manner that appropriately restricts the role of the distribution company in terms of generation ownership and market participation.

The first step in the process would require the distribution companies to perform distribution system assessments that identify all system constraints that might be addressed by DG. The company would then separate the individual system constraints into two categories: (1) those that

[10] DOER notes that there are a variety of different DG charges: auxiliary charges; exit fees; standby charges, backout charges, and interconnection related charges and fees. In DTE 99-47 the Department described a methodology acceptable for calculating auxiliary charges that DOER believes may be applied, as is, or modified, to exit fees, standby charges, and backout charges.

[11] DOER recognizes the design of the methodology is of interest to several parties (e.g. distribution companies, market participants, public interest groups, etc.). To expedite the process of designing a methodology that is satisfactory to all interested parties, DOER recommends that the Department initiate a collaborative working group to address this issue. Inherent in the recommendation that the Department develop a uniform methodology for DG charge calculations is the associated requirement to identify and define all relevant charges. This is necessarily the first step in the working group process.

[12] DG should not become a vehicle that enables the distribution companies to indirectly become a market participant by becoming involved in owning generation.

present reliability concerns; and (2) those that present congestion concerns. Based on this system assessment, the company would issue separate RFPs for the relative reliability and congestion constraints to solicit market proposals for DG mitigation projects. The RFPs would necessarily include an objective report that describes the relevant system constraints in a manner that reflects the true market value of the constraint and makes that value transparent to the potential bidders.[13] The distribution companies' role at this point would differ depending on whether the project/constraint was strictly reliability-related, or whether the primary goal/value of mitigating the constraint was congestion-related (i.e. economic in nature). For those projects that were related to reliability, the distribution companies would first attempt to encourage market solutions to alleviate the problem. If the market did not respond (or did not provide the least-cost solution), the distribution companies would then act to appropriately mitigate the reliability concern by offering to pay developers to install, maintain and operate DG (provided DG was the least-cost solution). For projects that were primarily related to alleviating congestion, the companies would first attempt to solicit market responses to alleviate the congestion. However, in this situation, if the market did not offer a response to the RFP, the distribution companies would limit their response to offering technical assistance, or, at most, access to low cost financing for the relevant project(s).[14]

The above process would facilitate the appropriate use of DG in distribution company system operation and would limit company ownership or control of DG to those situations where the market failed to provide the least-cost solution to reliability constraints.

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[13] DOER recognizes that there may be security concerns related to this information. The RFP process may therefore necessarily require the inclusion of appropriate safeguards to address these concerns.

[14] DG congestion mitigation projects have efficiency value in terms of cost. However, the fact that the market design incorporating zonal pricing for load socializes costs across a zone reduces the value of the market opportunity to market participants by muting distribution system congestion market signals. Therefore, the distribution company could offer incentives (e.g. financing) to potential market participants/bidders to mitigate the negative impact of the muted market signals to attract bidders.

DOER recommends that the Department take the following specific actions in the context of creating the appropriate regulatory framework for the potential use of DG in distribution company system planning and operation:

?? establish uniform distribution company planning procedures by which distribution utilities would assess the value of potential DG installations (which could include an accounting of the full range of costs and benefits offered by DG) relative to transmission or distribution system improvements; and

?? establish uniform reporting procedures by which distribution utilities would provide market participants (e.g., potential DG developers) with information regarding beneficial locations for siting on their transmission and distribution systems.

## IV. Recommended Process

DOER recognizes that due to the complexity of certain issues relative to others, a staggered review and implementation process may be necessary. To ensure process efficiency in terms of time DOER recommends the following process.

First, DOER recommends that upon review of all initial and reply comments, and after the close of the public hearing, the Department should identify all actions that it determines are required to achieve the benefits of DG. Second, the Department should identify all actions that may be implemented immediately and those that require further review and comment. Third, based upon this assessment the Department should implement a phased process that ensures all issues are reviewed thoroughly while facilitating the efficient implementation of all required actions. To ensure due process for all interested parties, the schedule of any phased process should be developed with input from all relevant parties.

DOER believes the Department's actions in this proceeding have the potential to facilitate the successful implementation of DG in Massachusetts by removing existing impediments to DG development. DOER appreciates the opportunity to comment and looks forward to participating in the proceeding going forward.

Respectfully submitted,

Commonwealth of Massachusetts
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